

ATTORNEY DOCKET NO: P50-0080**AMENDMENT TO THE SPECIFICATION**

Please replace paragraphs [17], [18] and [20] with the following amended paragraphs:

[0017] Illustrated in FIG. 1 is a radio frequency device 10 for a tire including a radio device 11 and an antenna 20 in accordance with the invention. The radio device 11 itself may be an identification or tracking device, such as may be used in manufacturing, distribution, and sales activities. The device 11 may also be or include a monitoring device for measuring temperature, pressure or other physical parameters in an operating tire. For example, the antenna 20 in such a device is used to transmit to and/or receive from an external device information by radio frequency. As another example, the antenna may also serve to receive energy from an interrogation device. Such radio devices may operate as receivers, transmitters, transponders or reflectors, and, because the antenna of the invention is useful for all these devices, in the following description, the term "radio device" is intended to be inclusive.

[0018] As shown in FIG. 2, advantageously, the radio frequency device 10 may be positioned in a number of different places in a tire, for example, the tread 19, near the bead 12, or at the tire equator 13. A single tire may include one or several such devices, for example, if it is desired to monitor physical parameters at different locations in the tire or to monitor different parameters. The device 11 and antenna 20 may be embedded in a rubber patch 30 which is adhered to a surface of a tire 14. Alternatively, the radio device 11 and antenna 20 may be embedded in the tire structure itself or layered under rubber material in the tire 14 which forms a surface. For example, the

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radio frequency device 10 may be positioned between the carcass ply 16 and the inner liner 15, between the carcass ply 16 and the sidewall 17, and/or between the belt package 18 and the tread 19. By "integrated" the inventors refer to either manner of incorporating the antenna 20 and radio device 11 in a tire.

[0020] To overcome loss of effective range, the antenna 20 in accordance with a first preferred embodiment of the invention includes an insulating coating 22. The embodiment shown in FIG. 1 illustrates the antenna 20 as having a sinusoidal form, which is advantageous for accommodating tensile forces in the tire material present in tire manufacturing operations and in normal tire operation. The antenna 20 can be any element capable of transmitting radio frequency energy. For example, and preferably for use in a tire, the antenna 20 is a wire formed of spring steel, brass coated spring steel, or spring brass. Such materials are able to resist metal fatigue under the cyclic repetitive deformations experienced by a tire structure.